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A NEW KANGAROO RAT FROM THE SAN JOAQUIN VALLEY,  
CALIFORNIA<sup>1</sup>

BY JOSEPH GRINNELL

The kangaroo rats of the *Dipodomys merriami* group inhabiting the great San Joaquin basin of south-central California are restricted to the Lower Sonoran life zone there and are believed to be cut off completely by continuous Upper Sonoran areas from the other representations of the group inhabiting the other southwestern tracts of Lower Sonoran. Since there is thus little chance for intermingling, it is interesting, and corroborative, to find that there is a seemingly constant character by which any individual from the San Joaquin Valley can be distinguished from any individual, of whatever race, of *merriami* from outside this area. The character in question involves the extreme base of the rostrum; the premaxillary tongues, extending backwards dorsally on either side of the nasals, are extremely narrow, and the entire rostrum at its base, in dorsal aspect, is notably narrow as compared with the condition in *merriami* from outside the San Joaquin Valley. Then, too, the sides of the rostrum are more nearly parallel to one another, and the angle made by each side with the anterior margin of the adjacent maxillary arch is better defined—less obtuse. The nasals, and the rostrum itself, are shorter.

Furthermore, within the San Joaquin basin there is geographic variation, involving other cranial features than those possessed in common, as well as features of color and general size. Three subspecies are recognizable: *Dipodomys merriami nitratoides* Merriam, of the eastern side of the valley southeast of Tulare Lake, from Tipton south to the vicinity of Bakersfield; *Dipodomys merriami exilis* Merriam, of the eastern side of the valley north of Tulare Lake, in the immediate vicinity of Fresno (perhaps now extinct as a result of the close cultivation of the country); and the race, now described, from the western side of the valley, from western Fresno County (across the river bottom lands from the Fresno district) south to near the mouth of San Emigdio Creek.

<sup>1</sup> Contribution from the Museum of Vertebrate Zoology of the University of California.

**Dipodomys merriami brevinasus** new subspecies

## SHORT-NOSED KANGAROO RAT

*Type*.—Male adult, skin and skull; no. 28634, Mus. Vert. Zool.; Hayes Station, near B. M. 503, 19 miles southwest of Mendota, Fresno County, California; June 30, 1918; collected by Richard Hunt; orig. no. 568.

*Comparative diagnosis*.—A broad-faced, four-toed, small-sized kangaroo rat belonging to the *merriami* group. In coloration nearest like *Dipodomys merriami merriami* Mearns; color tone of dorsum similar, but dark facial and tail markings averaging blacker. Coloration similar to that in *nitratoides* but paler in tone, more ochraceous. With respect to skull nearest like *nitratoides*, in that rostrum at base and premaxillary tongues are conspicuously narrower than in *merriami*, but mastoid bullæ larger and mastoid width decidedly greater, with interparietal and supraoccipital narrower. The rostrum in *brevinasus* is relatively shorter than in any other race of *merriami*. General size very slightly larger than in *nitratoides*, much larger than in *exilis*.

*Measurements* (in millimeters).—Of type: Total length, 252; tail vertebrae, 145; hind foot, 36; ear from crown, 11; greatest length of skull, 35.0; breadth of skull across bullæ, 23.2; spread of maxillary arches, 19.5; greatest length of nasals, 12.4; greatest width of rostrum near end, 3.1; width of rostrum close to base, 5.2; width of maxillary arch at middle, 4.7. Weight, in grams, 43.9.

*Distribution*.—Inhabits the atriplex association along the western side of the San Joaquin Valley, California, from western Fresno County south to near mouth of San Emigdio Creek, in southwestern Kern County. Life zone, Lower Sonoran.